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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/799,731	03/15/2004	James L. Pettigrew	2251.0010000	9990

26111 7590 07/06/2005

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EXAMINER

ZANELLI, MICHAEL J

ART UNIT PAPER NUMBER

3661

DATE MAILED: 07/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/799,731	Applicant(s) PETTIGREW ET AL.	
	Examiner Michael J. Zanelli	Art Unit 3661	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-45 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-45 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>8/23/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The application filed 3/15/04 has been examined. Claims 1-45 are pending.
2. The IDS filed 8/23/04 has been considered.
3. Claims 10, 27-41, 43 and 44 are objected to because of the following informalities:
 - A. As per claim 10, at line 1 delete extraneous "a".
 - B. As per claim 27, at line 1 "22" should be --26--.
 - C. All claims depending from an objected base claim are also objected to as containing the same deficiencies.
4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1, 2, 4, 10-15, 19-22, 26-29, 36 and 39-42 are rejected under 35 U.S.C. 102(b) as being anticipated by Permanne (6,411,869).
 - A. As per claims 1 and 26, Permanne discloses a system (Fig. 1) for generating and displaying engine performance data for an aircraft comprising a data acquisition module (M1) for obtaining sensor data, performance monitoring module (2) for comparing sensor data with stored diagnostic data related to engine performance and a display (3) for displaying engine-related (health) data and power available data (col. 1, lines 6-11; col. 2, lines 16-48; col. 6, lines 54-57; col. 7, line 49 to col. 8, line 11).

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B. As per claims 2, 4, 14, 15, 17, 27-29, 36, 39, as above whereby the performance monitoring unit (2) calculates target values such as rotor speeds, torque and power with indications when limits are exceeded (col. 2, lines 20-28, 39-47; col. 7, line 49 to col. 8, line 11).

C. As per claims 10-13, 19-22 and 40-41, as above whereby various graphical displays are produced which indicate the available power and other engine performance parameters. As shown in Figs. 4-6, the position of a caret relative to a bar provides an indication of engine performance and may use different colors (col. 7, lines 49-63).

6. Claims 1-4, 8-10, 14, 15, 19, 23-30, 34-36, 40 and 43-45 are rejected under 35

U.S.C. 102(e) as being anticipated by Vollum (2004/0254747).

A. As per claims 1 and 26, Vollum discloses a system (Figs. 1, 5) for generating and displaying engine performance data for an aircraft comprising a data acquisition module(s) (50) for obtaining sensor data, performance monitoring module (16) for comparing sensor data with stored diagnostic data related to engine performance and a display (14; Figs. 2A,B) for displaying engine-related (health) data and power available data (Abs; [0038, 0040, 0051, 0057, 0060-0085]).

B. As per claims 2-4, 8, 9, 14, 15, 27-30 and 34-36, as above whereby the performance monitoring module (16) calculates target values and/or limits for a plurality of performance parameters ([0060, 0068]).

C. As per claims 10, 19 and 40, as above whereby multi-color numerical and graphical displays and warning lights are provided which indicate available power and other engine performance parameters (Figs. 2A, 2B, 5; [0026, 0027, 0034, 0098]).

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D. As per claims 23, 24, 43 and 44, as above wherein the processes performed by the performance monitoring module (16) are repeated every 0.5 seconds to correct for changing ambient conditions (see Fig. 4 bottom; [0058]).

E. As per claims 25 and 45, as above whereby the claimed subject matter is broadly interpreted to be encompassed by the memory (Fig. 5:52) associated with the performance monitoring module (16) in performing the processes shown in Fig. 4.

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claims 5-7, 16-18, 20, 31-33, 37-39 and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vollum.

A. Vollum is applied as above. The claimed invention differs in that additional performance parameters are monitored and displayed. However, one of ordinary skill in the art would have found it obvious to include other commonly known performance

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parameters than those specifically addressed by Vollum whereby the number and type of parameters monitored would have been a function of the type of aircraft and/or engine as well as preferences as to which parameters are deemed critical for safe operation of the aircraft.

9. Claims 21 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vollum in view of Francois (5,886,649).

A. Vollum is applied as above. The claimed invention differs in that the displayed available power includes multi-engine aircraft. However, at the time of applicant's invention it was known in the aircraft art to provide engine performance displays for multi-engine aircraft. For example, Francois discloses a display for displaying performance parameters for multi-engine aircraft whereby the performance parameters for each engine may be shown on individual or combined graphical displays (Fig. 2; col. 2, lines 11-31; col. 3, lines 32-37). One of ordinary skill in the art at the time of invention would have found it obvious to apply the teachings of Vollum to multi-engine aircraft such that the pilot would be provided with performance information for each engine.

10. Claims 11-13 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vollum in view of Permanne and Ing et al. (2002/0016654).

A. Vollum is applied as above. The claimed invention differs in that the performance data is indicated using different colored carets relative to an indicating bar. However, as previously noted above in paragraph 5C Permanne discloses various graphical displays which indicate the available power and other engine performance

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parameters. As shown in Figs. 4-6, the position of a caret relative to a bar provides an indication of engine performance and may use different colors (col. 7, lines 49-63). In addition, Ing discloses an aircraft display which uses multi-colored carets and scales/bars to show performance parameters (Fig. 2; [0010, 0017]). It would have been obvious to one of ordinary skill in the art to provide alternative means of displaying the performance information whereby the pilot may readily ascertain the operating performance of the engine.


11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The cited documents are of general interest.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael J. Zanelli whose telephone number is (571) 272-6969. The examiner can normally be reached on Monday-Thursday 8:30 AM - 3:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas G. Black can be reached on (571) 272-6956. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/mjz


MICHAEL J. ZANELLI
PRIMARY EXAMINER